AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for frequency-time sliced resource allocation in a multi-tier wireless ATM network, the method comprising:

a) receiving at a reservation-based port controller on a wireless signaling channel ~~a~~ one or more requests for access to a shared frequency-time sliced wireless medium;

b) combining received requests with queued requests;

c) prioritizing combined requests with respect to priority class and order of arrival; and

d) determining, on a request-by-request basis, whether a requested size is larger than the total number of available frequency-time slots and accordingly queues a request or ~~searching~~ searches a channel chunk matrix (CCM) for a match ~~set of available frequency time slots, wherein the channel matrix represents a time frame within the shared frequency time sliced wireless medium; and~~

~~c) allocating the set of available time slots if the allocation does not violate a frequency switching constraint, and if the set of available frequency time slots contains a number of slots no smaller than a requested number of slots~~.

2. (Currently amended) The method of claim 1, further comprising:

~~wherein the searching step comprises searching a channel chunk matrix~~

generating said CCM from a channel matrix for indexing and referencing resources available in said multi-tier wireless ATM network; wherein

said channel matrix represents a collection of ~~comprising a list of contiguous chunks of available time slots in each frequency of the shared~~ frequency-time ~~sliced wireless medium~~ slots.

3. (Currently amended) The method of claim ~~1~~ 2, further comprising:

~~wherein the searching step comprises searching for a set of available time slots such that all the available time slots are in a single frequency~~

grouping empty time slots in each frequency, which is represented by a column of said channel matrix, into contiguous chunks;

sorting said contiguous chunks in order of magnitude; and

recording respective slot position and size of said contiguous chunks in a corresponding column of said CCM.

4. (Currently amended) The method of claim ~~3~~ 1, wherein

said match is a feasible frequency-time slot or chunk of slots whose assignment to said requested size does not result in a violation of frequency switching constraints ~~the searching step comprises searching for a single contiguous set of available time slots~~.

5. (Currently amended) The method of claim ~~4~~ 1, wherein

~~the size of the set of available slots is equal to the requested size~~

said match is a feasible frequency-time slot or chunk of slots whose size equals to said requested size.

6. (Currently amended) The method of claim ~~4~~ 1, wherein

the ~~size of the set~~ total number of available frequency-time slots is greater than the requested size, step d) further comprising:

searching said CCM for a single frequency that has multiple feasible chunks whose cumulative size is equal to or greater than the requested size.

7. (Currently amended) The method of claim 1, wherein

the total number of available frequency-time slots is greater than the requested size, step d) further comprising:

~~the searching step comprises~~ searching said CCM for ~~a set of available slots such that the available time slots are in~~ multiple feasible chunks from multiple frequencies.

8. (Currently amended) The method of claim ~~1~~ 3, wherein

~~the searching step comprises a greedy resource allocation strategy~~

each entry in said corresponding column of said CCM contains a pair of integers representing the number of idle time slots in a chunk and the temporal position thereof.

9. (Currently amended) The method of claim ~~8~~ 1, wherein

said match is found by ~~the~~ a greedy resource allocation strategy ~~comprises~~ comprising the following successive allocation steps:

a) searching for a single contiguous set of available time slots in a single frequency, where the size of the set of available slots is equal to the requested size;

b) searching for a single contiguous set of available time slots in a single frequency, where the size of the set of available slots is greater than the requested size;

c) searching for separate chunks of available time slots in a single frequency; and

d) searching for separate chunks of available time slots in multiple frequencies.

10. (Currently amended) The method of claim 9, wherein

each allocation step comprises checking whether the allocation violates a frequency switching constraint.

11. (Currently amended) The method of claim 1, further comprising:

~~combining the received request with other requests and prioritizing the combined requests~~

saving unsatisfied requests in a request queue, each unsatisfied request having a requested size larger than the total number of available frequency-time slots.

12. (Currently amended) The method of claim 1, further comprising:

~~updating the channel matrix and~~ transmitting a notification of allocation to a user.

13. (New) The method of claim 1, wherein

the queued requests have higher priority than the received requests in the same priority class.

14. (New) A radio port controller configured to perform the method steps of claim 1.

15. (New) A digital computer system configured to perform the method steps of claim 1.

16. (New) A computer readable medium tangibly embodying a computer-executable program of instructions implementing the method steps of claim 1.